REMARKS

This application has been carefully reviewed in view of the above-referenced Office Action. The undersigned has reviewed the Examiner's position and the claims and respectfully submits that the Office Action is in error. Minor clarifying amendments to certain of the claims have been made in the present response. Reconsideration is requested in view of the prior and following remarks.

Regarding the Rejections under 35 U.S.C. §103

The present Office Action rejects the claims based upon the combination of Colligan, Nardone and Carny, all of record. Applicants reiterate the prior arguments from the prior Office Action response and of the pre-appeal brief remarks. The references under consideration are discussed briefly below.

The Colligan Reference

The Colligan reference is the primary reference used in all rejections in this action. In particular, the process described in col. 7, lines 35-59 describing the process of Fig. 7, and col. 11, lines 48-57 are pointed out as teaching portions of Applicants' claims.

The undersigned reiterates that the process of Fig. 7, as described in Colligan, is a "multi-layer encryption process". In Colligan, content is pre-encrypted at the source using single DES encryption and then later double DES encrypted at the server (the order of single or double DES encryption may be reversed). The resulting content is, therefore, triple encrypted. That is, the content is encrypted to produce first encrypted content. The first encrypted content is then encrypted again so that it is double encrypted. The double encrypted content is then encrypted again to produce triple encrypted content. Inherently, this means that three keys are required to decrypt the content.

Colligan explicitly states at col. 7, lines 56-59 that "As long as the subscriber station has the three keys required, it will be able to fully decrypt (706) the triple-DES encryption to obtain the unencrypted video program". Hence, in order for the user to access the encrypted content, three separate keys must be used to decrypt, then decrypt again, then decrypt a third time the

encrypted content. This process differs dramatically from the claimed invention and in no way teaches or suggests the process carried out as claimed. It is Colligan that explicitly requires three keys, whereas Applicants only require one, but in either case, the number of keys needed flows inherently from the encryption technique.

Applicants' claims call for a single segment to be duplicated so that each copy is encrypted individually using separate encryption methods. This point has apparently been accepted in view of considering the arguments persuasive and reopening of prosecution after the Pre-Appeal Brief Conference. Moreover, as will be expanded upon later, Applicants have devised a novel storage arrangement that both provides for segregation of content for multiple decryption capabilities of recipients and facilitation of trick play modes.

The Nardone Reference

The Nardone Reference is used to illustrate selection of I frames for selective encryption in a single stream which is selectively encrypted using one encryption algorithm. But in fact, Nardone only teaches selection of BTUs (which may be an I frame) for single selective encryption.

The Carny Reference

The Carny reference is well known to Applicants. The Carny reference has been studied extensively by the undersigned as well as the inventors and other experts in the field. Applicants agree that Carny duplicates packets. Carney encrypts content by dividing the content into multiple portions, each of which is encrypted with a different key. The multiple keys are assembled as a "meta-key" that is individualized to the recipient. This individualized meta-key is then required in order to decrypt Carny's encrypted content. Carny's clearly stated objective is to encrypt content in a manner such that an examination of the key or the encrypted content will reveal the party for whom the content was originally encrypted. In this manner, the identity of the recipient can be traced, should the recipient further distribute the content in an unauthorized manner (for example, see paragraphs [0002], [0007] and [0047]). For Carny to be operative,

many possible meta-keys must be provided for – Applicants have no such need for large numbers of meta-keys.

Carny stores multiple encrypted copies of the content, encrypted under multiple keys, so that meta-key encrypted content can be rapidly assembled for delivery to a recipient. However, Carny never assembles a copy of the content based upon the decryption capabilities of the recipient. Moreover, if Carny is modified so that more than one recipient could decrypt his content, Carny's objective is of personalized encryption would be defeated.

Regarding Claim 19

The Office Action begins stating its position as to the obviousness rejection by discussion of Claim 19, hence we will begin here also. In accord with Graham v. John Deere, 383 U. S. 1 (1966), the Supreme Court set out a framework for applying the statutory language of §103 in making an objective analysis of obviousness. The Court stated that "under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented."

In accord with this analysis, it is essential that the differences between the claims and the cited art be ascertained. In order to establish *prima facie* obviousness, it is the burden of the Office to identify each element of the claims in the prior art and further, to provide an explicit analysis as to the reasoning to support a conclusion of obviousness. (See In re Kahn, 441 F. 3d 977, 988 (CA Fed. 2006) - "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness").

In the present case, the cited art fails to provide each claim element described. Further, the Office Action is devoid of any articulated reasoning as to why one of ordinary skill in the art

would find the claims as a whole to be obvious in the absence of the claim features enumerated above that are not present in the cited art.

Now considering claim 19 explicitly and in great detail, it should first be noted that claim 19 calls for selecting a plurality of intra-coded frames (selected frames) from the available "intra-coded frames" for encryption, and encrypting the "selected frames" under a first encryption algorithm. This produces "first encrypted frames".

Let us recap so far: At this point, we have "intra-coded frames", selected ones of which ("selected frames") are encrypted by a first encryption algorithm ("first encrypted frames").

Now, the claim calls for storing "inter-coded" frames in a first file.

Next, the claim calls for storing "intra-coded frames" in a second filed, whether or not the intra-coded frames are encrypted.

Again, let us recap, there are inter-coded frames stored in a first file and intra-coded frames that may or may not be encrypted stored in a second file.

Now the claim calls out that the unencrypted intra coded frames are duplicated and that "duplicates of the selected frames" are encrypted to under a second encryption algorithm. (note that this duplication is of all the intracoded frames, not necessarily just the first encrypted frames, and the claim has been amended to assure clarity in this point).

The duplicate intra-coded frames are then stored in a third file, whether encrypted or unencrypted.

At this point, the original content has been processed so that there are now three files as follows:

File 1 – inter-coded frames.

File 2 – intra-coded frames with selected frames encrypted under a first encryption algorithm.

File 3 – intra-coded frames with selected frames encrypted under a second encryption algorithm.

Let us continue at this point with the claim analysis. At this point, a request is received from a subscriber for the content. The process determines that the subscriber is enabled to decrypt under the second encryption algorithm. Hence, the content is retrieved from the first and

third files and sent to the subscriber (based upon the fact that the subscriber is enabled to decrypt the second encryption algorithm).

It is respectfully submitted that the Office Action fails to provide any line of reasoning as to why this process – including each and every feature as described above – is either present in the cited art or obvious. The Colligan reference describes a multiple layer encryption process. Nardone teaches selection of BTUs (which may be an I frame) for single selective encryption. Carny, while providing the only viable teaching the use of pre-encryption with multiple keys for different segments of content, never segregates the pre-encrypted content as taught and claimed by Applicants for assembly based upon the decryption capabilities of a recipient on demand. Moreover, as will be noted later, Carny's teachings provide an unique set of encrypted content that uses an unique meta-key that can only be used by a single recipient to facilitate identification of a recipient that engages in unauthorized redistribution of the content. Failure to assemble an unique key based upon the identity of the recipient (not just the recipient's decryption capabilities) defeats the fundamental premise of Carny.

Moreover, it is noted that the claim explicitly and precisely calls out storage of the content in three separate files as outlined above. One file has inter-coded frames, and the other two have intra-coded frames that are either encrypted or unencrypted depending upon whether or not a particular intra-coded frame is a selected frame. The cited art contains not the barest of suggestion of such a segregation of the various frames as claimed. Moreover, the file arrangement feature is glossed over in the rejection without receiving any substantial consideration. These claim features must be accounted for in order to make a viable case of *prima facie* obviousness,

As described in the specification (e.g., in connection with Fig. 8), such segregation of the frames as described not only permits rapid assembly of content based upon the decryption capabilities of the recipient, but further facilitates trick play functions in a video on demand environment by permitting the intra-coded frames to be readily accessed independently of the inter-coded frames with reduced processing to facilitate fast forward and fast reverse functions (for example) in an expedient manner. Moreover, since the inter-coded frames are stored in a

single separate file used for both types of encryption, storage efficiency is enhanced over full encryption using both encryption algorithms. None of the cited art holds these advantage, or teaches or fairly suggests segregation of the data in this manner or any advantage of such whatsoever.

In order to establish that claim 19 is indeed obvious over the cited combination, each of the claim features must be accounted for in the art (including the specified file arrangement) together with some "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness". Otherwise, as is the case here, *prima facie* obviousness has not been established. Reconsideration of claim 19 and allowance are respectfully requested.

Regarding Claim 20

The Office Action asserts that Colligan discloses that content is retrieved from first and third files in an order of sequential frames of the content, but then refers to a passage of Nardone (col.3, lines 19-28). Applicants find no such teaching in Colligan. The passage referenced in Nardone describes Fig. 4 of Nardone and contains no disclosure whatsoever of retrieval of content from multiple files in the manner taught and claimed. The disclosure simply doesn't exist. In combination with the shortcomings of the rejection of the parent claim 19, it is submitted that the rejection of claim 20 is also deficient. Reconsideration and allowance are respectfully requested.

Regarding claims 4, 11-18 and 21-31

The Office Action asserts that these claims encompass the same scope as claims 19-20 and are rejected for the same reasons. Assuming arguendo this is the case, the above reasons for deficiency of the rejections are equally applicable. However, Applicants wish to note that at least the following additional features have clearly not been considered at all:

In claims 23-31 are apparatus claims having specific hardware elements that have not been addressed in this rejection.

In claims 18 and 29, particulars regarding trick play operation are specified which have not been addressed in this rejection.

In view of the above, all claims 4, 18, 23-31 are submitted to be allowable. Reconsideration and allowance are respectfully requested.

Specifically Regarding the Combination of References

While the recent Supreme Court decision in KSR v. Teleflex (No. 04-1350, decided April 30, 2007) has indicated that the so called TSM test should not be applied rigidly, it nevertheless affirmed that a valid rejection must contain "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness" and affirmed that when the prior art teaches away from the claimed combination, that the combination is less likely to be obvious, and affirmed that some rational line of motivation to make the proposed combination must be articulated. There is no motivation in the art to make the combination of Carny, Colligan and Nardone. Nardone provides for selective encryption on a compact disc or the like, but Carny's system is specifically designed as a system used to fulfill individualized orders for content in a manner that identifies the recipient. There is no reason known in the art at the time of the invention why one would wish to duplicate and multiple selectively encrypt packets within the context of Nardon's teachings or Colligan's teachings. Taken from the other perspective, Carny's system is fully inoperative without generation of an individualized meta-key to provide for his personalization function. Moreover, there is no teaching in the cited art of the file segregation arrangement taught and claimed, nor the advantages associated with file storage and trick play.

Moreover, the only reason given for making the combination is "because they are analogous art" (near middle and end of paragraph 4). More is required than such a broad statement (See In re Kahn, 441 F. 3d 977, 988 (CA Fed. 2006) - "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness"). The particular claim features described and argued above are simply not appropriately accounted for in an articulated line of reasoning for making the proposed combination and for supplying the missing claim features. Without evidence, that it would have been obvious to modify the primary references to bring about this combination, *prima facie*

obviousness cannot be established. In re Dembiczak, 175 F.3D 994, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999) (the range of sources available does not diminish the requirement for **actual evidence**, and "broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence"). In view of the clear lack of evidence, there is no motivation to make the proposed combination.

Concluding Remarks

The undersigned additionally notes that many other distinctions exist between the cited art and the claims. However, in view of the clear distinctions pointed out above, further discussion is believed to be unnecessary at this time. Failure to address each point raised in the Office Action should accordingly not be viewed as accession to the Examiner's position or an admission of any sort. Moreover, the Examiner is reminded that each and every word of the claims must be given its appropriate weight in considering the patentability of the claims.

Interview Request

In the event the Examiner feels that the current arguments do not address all rejections fully and render the claims patentable, the undersigned the undersigned respectfully requests the courtesy of an interview, either in person or telephonic at the Examiner's convenience. The undersigned can be reached at the telephone number below and sincerely wishes to avoid the necessity of a costly and unnecessary appeal of this matter.

Respectfully submitted,

/Jerry A. Miller 30779/

Jerry A. Miller, Registration No. 30,779
Dated: 5/2/2007

Please Send Correspondence to:
Miller Patent Services
2500 Dockery Lane
Raleigh, NC 27606
Phone: (919) 816-9981
Fax: (919) 816-9982
Customer Number 24337